

67760-105

3/4/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Carrie M. Tackema  
Cheminova Inc.  
One Park Drive, Suite 150  
P.O. Box 110566  
Research Triangle Park, NC 27709

MAR 4 2013

Subject: Label Notification per PRN 98-10  
Product Name: Solida Herbicide  
EPA Registration Number: 67760-105  
Application Dated: February 12, 2013

Dear Ms. Tackema,

The Agency is in receipt of your application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for Solida Herbicide (EPA Reg. No. 67760-105) dated February 12, 2013. The Registration Division (RD) has conducted a review of this request for its applicability under 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please contact Emily Hartman of my staff at (703) 347-0189 or [hartman.emily@epa.gov](mailto:hartman.emily@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis, Product Manager 25  
Herbicide Branch  
Registration Division  
Office of Pesticide Programs

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<b>EPA</b>	United States	<input type="checkbox"/> Registration	OPP Identifier Number
	Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	

## Application for Pesticide - Section 1

1. Company/Product Number <b>67760-105</b>	2. EPA Product Manager <b>Kable Bo Davis</b>	3. Proposed Classification  <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>SOLIDA™ herbicide</b>	PM# <b>25</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>Cheminova Inc. One Park Drive, Suite 150 P.O. Box 110566 Research Triangle Park, NC 27709</b>		6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. <u>352-853</u> Product Name <u>DuPont LEADOFF™ herbicide</u>
<input checked="" type="checkbox"/> Check if this is a new address		

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

**NOTIFICATION****Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)**MAR - 4 2013****NOTIFICATION PER PRN 98-10**

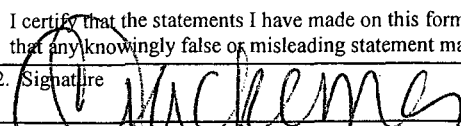
This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146 and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formulation for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146 and 156.156, this product may be in violation of FIFRA and I am subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**\*Contact: Carrie M. Tackema: [carrie.tackema@cheminova.com](mailto:carrie.tackema@cheminova.com) or fax: 919-474-6629**

## Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <b>*Certification must be submitted</b>	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Unit Packaging wgt. No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Package wgt. No. per container	2. Type of Container <input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input checked="" type="checkbox"/> Other (Specify) - fiber drums or sacks
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 10 oz. - bulk	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Other <input checked="" type="checkbox"/> Paper glued <input checked="" type="checkbox"/> Stenciled			

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Carrie M. Tackema</b>	Title <b>Regulatory Affairs Manager</b>	Telephone No. (Include Area Code) <b>919-474-6617</b>
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received  (Stamped)
2. Signature 	3. Title <b>Regulatory Affairs Manager</b>	
4. Typed Name <b>Carrie M. Tackema</b>	5. Date <b>February 12, 2013</b>	



Cheminova, Inc.  
P.O. Box 110566  
One Park Drive, Suite 150  
Research Triangle Park, NC 27709

3/54  
Phone: 919-474-6600  
Fax: 919-474-6629  
Customer Service:  
1-800-548-6113

**Via Courier Delivery**

February 12, 2013

Kable Bo Davis, Product Manager Team 25  
Herbicide Branch  
Office of Pesticide Programs  
U.S. Environmental Protection Agency  
One Potomac Yard (South Building)  
2777 South Crystal Drive  
Arlington, VA 22202

**RE: SOLIDA® herbicide, EPA Reg. No. 67760-105  
Notification per PRN 98-10**

Dear Mr. Davis:

Cheminova, Inc. hereby submits a Notification for the above-referenced product under PR Notice 98-10. The purpose of this Notification is to include a labeling statement required by the State of California. ~~There~~ (2) copies of the label are enclosed, one of which includes the specific language highlighted. Should you require further clarification from CDPR, our Specialist is Ms. Alveena Prasad (916) 324-3905.

If you should have any questions, please contact me directly at (919) 474-6617 or by email at [carrie.tackema@cheminova.com](mailto:carrie.tackema@cheminova.com).

Sincerely,

Carrie M. Tackema  
Regulatory Affairs Manager  
Enclosure(s)

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GROUP **2** HERBICIDE

**SOLIDA<sup>®</sup>**  
herbicide

**NOTIFICATION**

**MAR - 4 2013**

*Water Dispersible Granule*

For Weed Control in Field Corn, Citrus Fruit, Stone Fruit, Tree Nuts, Pome Fruit, Grapes, Blueberry (High and Low Bush), Caneberry (Raspberry, Blackberry), Potatoes, Potatoes Grown for Seed, Field-Grown Tomatoes, Preplant Weed Control in Cotton and Soybeans, Rangeland Restoration, Non-Crop Sites including Industrial Sites, Roadsides, Highway Medians, Utility Substations, Non-Cropland Wildlife Habitats.

**\*NOT FOR USE ON BLUEBERRIES, CANEBERRIES, PREPLANT BURNDOWN IN COTTON AND SOYBEAN IN THE STATE OF CALIFORNIA**

**ACTIVE INGREDIENT:**

Rimsulfuron

N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide..... 25.0%

**OTHER INGREDIENTS** ..... 75.0%

**TOTAL** ..... 100.0%

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL  
FREE, DAY OR NIGHT 1-866-303-6950.**

Read the entire label before using this product.

Use only according to label instructions.

Read "DISCLAIMER" before buying or using.

If terms are not acceptable, return product unopened without delay.

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS,

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

EPA Reg. No. 67760-105

EPA Est. No.

**NET CONTENTS:**

**Cheminova, Inc.  
One Park Drive, Suite 150  
P.O. Box 110566  
Research Triangle Park, NC 27709**

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#### FIRST AID

##### IF ON SKIN

**OR CLOTHING:** Take off contaminated clothing. Rinse skin with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-866-303-6950** for emergency medical treatment information.

#### PRECAUTIONARY STATEMENTS

**HAZARD TO HUMANS AND DOMESTIC ANIMALS**  
**KEEP OUT OF REACH OF CHILDREN**

**CAUTION:** Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, shoes plus socks, and chemical resistant gloves from category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber  $\geq 14$  mils.

Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS:

**Users should:** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove and wash contaminated clothing before reuse.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENGINEERING CONTROL STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR, part 170, Section 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food, or feed in storage. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### CONTAINER DISPOSAL:

#### Nonrefillable containers less than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## Agricultural Use Requirements

Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is: coveralls, shoes plus socks, and chemical resistant gloves (such as Natural Rubber, Selection Category A).

## Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or

greenhouses. Use on non-crop sites and turf (unimproved) are not within the scope of the Worker Protection Standard. Do not enter or allow worker entry into treated areas until sprays have dried.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with the terms of this label. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency in your State responsible for pesticide regulation.

## PRODUCT INFORMATION

SOLIDA herbicide must be used only in accordance with instructions on this label or in separate published labeling. Cheminova will not be responsible for losses or damage resulting from the use of this product in any manner not specifically instructed by Cheminova. SOLIDA herbicide is a water-soluble granule formulation that selectively controls certain grass and broadleaf weeds in pome fruit, citrus fruit, tree nut, stone fruit, and grape crops which have been established for at least one full growing season, and in blueberries and caneberries. SOLIDA herbicide also selectively controls certain grass and broadleaf weeds in potatoes, potatoes grown for seed, field-grown tomatoes (direct-seeded and transplant), and field corn. SOLIDA herbicide can be used for restoration of rangeland infested with invasive weed species and along roadsides and highway medians, at industrial plant sites, utility substations, and other non-agricultural or non-cropland sites. SOLIDA herbicide may also be applied 30 days or more preplant to cotton or soybeans for winter vegetation management.

SOLIDA herbicide has postemergence and residual (preemergence to weeds) activity. Rainfall or sprinkler irrigation is needed within 2 weeks of application to activate SOLIDA herbicide in the soil. For the most effective weed control, rainfall or sprinkler irrigation is needed within 5 to 7 days after application to move SOLIDA herbicide into the soil.

The best postemergence control is obtained when SOLIDA herbicide is applied to young, actively growing weeds. The degree and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment.

SOLIDA herbicide is registered for use in most states. Check with your state extension service or Department of Agriculture before use to be certain SOLIDA herbicide is registered in your state.

## TANK MIXTURES

To broaden the weed control spectrum and/or extend the residual effectiveness of SOLIDA herbicide, SOLIDA herbicide may be tank mixed with other registered herbicides affecting a different site of action (mode of action) and/or adjuvants registered for use on the crops listed on SOLIDA herbicide labeling. Refer to the label(s) of the tank mix partners for any additional use instructions or restrictions. *Do not use SOLIDA herbicide in a spray solution with additives that buffer the pH to below 4.0 or above 8.0, as degradation of SOLIDA herbicide may occur.*

### Tank Mix Compatibility Testing

Perform a jar test prior to tank mixing to ensure compatibility of SOLIDA herbicide and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately ½ hour. If the mixture balls-up, forms flakes, sludge, gel, oily film or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

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See section: "ADDITIONAL USE INFORMATION – ALL CROPS AND USES" for more product and use information.

## USES

### BURNDOWN AND RESIDUAL CONTROL OF CERTAIN ANNUAL GRASS AND BROADLEAF WEEDS WHEN APPLIED PREEMERGENCE AND POSTEMERGENCE TO FIELD CORN

#### APPLICATION INFORMATION FOR FIELD CORN

SOLIDA herbicide is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied preemergence and postemergence to field corn. SOLIDA herbicide may be applied to "Roundup Ready" corn in tank mix combinations with glyphosate herbicides such as Glyphos® or Glyphos® XTRA to add residual control for later emerging weeds. Residual weed control is dependent on rainfall or sprinkler irrigation for herbicide activation.

If cultivation is necessary because of soil crusting, soil compaction, or weed germination before rain or irrigation occurs, use shallow tillage such as a rotary hoe to lightly incorporate SOLIDA herbicide and make certain corn seeds are below the tilled area.

SOLIDA herbicide is best used in a planned sequential application herbicide program to be followed by an in-crop application of SOLIDA herbicide and/or other postemergence-applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

Allow at least 4 weeks between preemergence applications of SOLIDA herbicide and postemergence applications of SOLIDA herbicide. Make sequential applications after the corn has reached the 2-collar stage but before the corn exceeds the maximum application height listed on the respective product labels.

Do not apply to field corn grown for seed or to popcorn or sweet corn. Do not apply preemergence to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter. Do not apply by air in the States of California and New York.

Apply SOLIDA herbicide to field corn hybrids with a relative maturity (RM) of 77 days or more, including "food grade" (yellow dent, hard endosperm), waxy, and High-Oil corn. Not all field corn hybrids of less than 77 RM and not all white corn hybrids or Hi-Lysine hybrids have been tested for crop safety, nor does Cheminova have access to all seed company data. Consequently, injury arising from the use of SOLIDA herbicide on these types of corn is the responsibility of the user. Consult with your seed supplier before applying SOLIDA herbicide to any of these corn types. Seed company publications indicate "Warning", "Crop Response Warning", or "Sensitive" notations for the use of some ALS herbicides on corn hybrids of 77 RM or higher. As noted in the seed company publications, Cheminova sulfonylurea herbicides such as SOLIDA herbicide should be used with caution on these hybrids.

#### FALLOW (BURNDOWN)

##### *Use Rates*

Apply SOLIDA herbicide at 1 to 2 ounces per acre.

##### *Application Timing*

SOLIDA herbicide may be used as a fallow treatment in the spring or fall when the majority of weeds have emerged and are actively growing. Field corn may be planted to this treated area at any time.



***Tank Mixtures in Fallow***

SOLIDA herbicide may be used as a fallow treatment and may be tank mixed with other herbicides that are registered for use in fallow. Read and follow all instructions on this label and the labels of any tank mix partner before using any other herbicide in mixtures with SOLIDA herbicide. If the directions on the tank mix partner label conflict with this SOLIDA herbicide label, do not use in a tank mixture with SOLIDA herbicide.

**PREEMERGENCE TO FIELD CORN*****Preemergence Rates***

SOLIDA herbicide may be applied at 0.5 to 2.0 oz product per acre before corn emergence. Cheminova specifies a rate of 1 to 1.5 oz per acre for most applications.

***Application Timing***

SOLIDA herbicide may be applied preemergence or preplant to corn. Applications of SOLIDA herbicide made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds will require the addition of spray adjuvants as noted below.

**POSTEMERGENCE TO FIELD CORN*****Postemergence Rates***

SOLIDA herbicide may be applied at 0.5 to 2 oz per acre as a postemergence broadcast application. Cheminova specifies a use rate of 1 oz per acre for most applications.

***Application Timing***

To crop: Apply SOLIDA herbicide to corn that is up to 12 inches tall. Do not apply to corn taller than 12 inches or exhibiting 6 or more leaf collars, whichever is more restrictive. Applications of SOLIDA herbicide made after weed emergence will provide contact control of labeled weeds as well as limited residual control of later emergence.

To weeds: Tank mixtures of SOLIDA herbicide with glyphosate or glufosinate herbicides may be applied after weeds emerge but before they reach the maximum size listed on the glyphosate and glufosinate herbicide labels.

Do not apply more than a total of 1.0 oz active ingredient (4 oz product) rimsulfuron per acre during the crop year from all sources. This includes combinations of preemergence and postemergence applications of SOLIDA herbicide or other rimsulfuron-containing products.

**SPRAY ADJUVANTS**

For control of emerged weeds, application of SOLIDA herbicide must include a nonionic surfactant and an ammonium nitrogen fertilizer. If applied in a tank mix combination with a glyphosate herbicide product such as Glyfos® X-TRA or a glufosinate product such as Liberty® that contains a built-in adjuvant system, no additional surfactant needs to be added. Crop oil concentrate may be used in place of nonionic surfactant for burndown applications of SOLIDA herbicide made before crop emergence. Products must contain only EPA-exempt ingredients (40 CFR 910 or 40 CFR 920).

***Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)***

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.

- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

### Nonionic Surfactant (NIS)

- Apply at 0.25% v/v (1 qt per 100 gal spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

### Ammonium Nitrogen Fertilizer

- Use 2 qt per acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 lb per acre of a spray-grade ammonium sulfate (AMS).
- Do not use liquid nitrogen fertilizer as the total carrier solution after crop emergence.

### Special Adjuvant Types

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product labeling for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with SOLIDA herbicide unless instructed to do so on Cheminova labeling.

## WEEDS IN FIELD CORN CONTROLLED/SUPPRESSED

## Preemergence Control

### Grass weeds

Barnyardgrass  
Bluegrass, annual\*  
Crabgrass, large\*  
Foxtail (bristly, giant, green, yellow)  
Panicum, fall\*  
Signalgrass, broadleaf\*  
Wheat, Volunteer  
Wild Oat\*

\*partial control/suppression

### **Broadleaf weeds**

- Carpetweed\*
- Chamomile, false
- Cocklebur\*
- Filaree, Redstem
- Henbit
- Jimsonweed\*
- Kochia (ALS-sensitive)
- Lambsquarters, common
- Morningglory, ivyleaf\*
- Mustard (birdsrape, black)
- Nightshade\* (hairy, black)
- Palmer, amaranth\*
- Pigweed (prostrate, redroot, smooth)
- Purslane, common
- Ragweed, common\*
- Russian thistle, seedling\*
- Smartweed, Pennsylvania\*
- Velvetleaf\*

\*partial control/suppression

## Postemergence Control

### Grass weeds (1-2")

Barley, volunteer  
 Barnyardgrass  
 Bluegrass, annual  
 Crabgrass, large (1/2")  
 Cupgrass, woolly (1")  
 Foxtail (bristly, giant, green, yellow)  
 Johnsongrass, seedling\*  
 Millet, wild proso\*  
 Panicum, fall  
 Quackgrass\*  
 Ryegrass, Italian\*  
 Shattercane (4")  
 Signalgrass, broadleaf\*  
 Stinkgrass\*  
 Wheat, volunteer  
 Wild oat\*  
 Yellow nutsedge\*

\*partial control/suppression

### Broadleaf weeds (1-3")

Alfalfa, volunteer^  
 Canada, thistle\*  
 Chickweed, common  
 Cocklebur\*  
 Dandelion (6" diameter)  
 Henbit  
 Kochia  
 Lambsquarters, common\*  
 Morningglory, ivyleaf\*  
 Mustard (birdsrape, black, wild)  
 Nightshade, hairy\*  
 Pigweed, (prostrate, redroot, smooth)  
 Purslane, common\*  
 Ragweed, common\*  
 Shepherd's purse  
 Smartweed, Pennsylvania\*  
 Wild radish  
 Velvetleaf\*

\*partial control/suppression

^Except in California

## TANK MIXTURES

SOLIDA herbicide may be tank mixed with full or reduced rates of other products registered for use in corn. Read and follow all manufacturers' label instructions for the companion herbicide. If these instructions conflict with this SOLIDA herbicide label, do not use a tank mixture with SOLIDA herbicide.

### Preemergence to Corn

#### For Additional Control of Grass and Broadleaf Weeds

SOLIDA herbicide may be tank mixed with full or reduced rates of preemergence grass and broadleaf herbicides such as atrazine, Metolachlor, S-Metolachlor, "Harness", "Outlook", "Balance PRO", and "Lumax" to provide added residual activity or burndown activity on emerged weeds. Consult tank mix partner labeling for rate and soil-type restrictions.

### Postemergence to Corn

#### Tank Mixtures with Glyphosate

SOLIDA herbicide may be tank mixed with glyphosate herbicides if applications are made to corn hybrids containing the "Roundup Ready" gene. Consult with your seed supplier to confirm the corn hybrid is "Roundup Ready" before making any herbicide application containing glyphosate herbicides.

When used in a tank mixture with glyphosate herbicides, 1 oz. SOLIDA herbicide will deliver improved burndown and/or residual activity on the following weeds, as compared to glyphosate used alone:

Alfalfa, volunteer\*  
 Barley, volunteer  
 Barnyardgrass  
 Bluegrass, annual  
 Canada thistle

Johnsongrass, seedling  
 Kochia  
 Lambsquarters, common  
 Millet, wild proso  
 Morningglory, ivyleaf

Sandbur (field, longspine)  
 Shepherd's purse  
 Signalgrass, broadleaf  
 Smartweed, Pennsylvania  
 Stinkgrass

Chamomile, false	Mustard (birdsrape, black, wild)	Velvetleaf
Chickweed, common	Nightshade, hairy	Wheat, volunteer
Cocklebur	Panicum, fall	Wild buckwheat
Crabgrass	Pigweed (prostrate, redroot,	Wild oat
Dandelion (6" diameter)	Purslane, common	Wild radish
Filaree, redstem	Quackgrass	Yellow nutsedge
Foxtail (bristly, giant, green,	Ragweed, common	
Henbit	Ryegrass, Italian	

\*Except in California

#### **Tank Mixtures with Glufosinate**

SOLIDA herbicide may be tank mixed with glufosinate herbicides if applications are made to corn hybrids containing the "Liberty Link" gene. Consult with your seed supplier to confirm the corn hybrid is "Liberty Link" before applying any herbicide containing glufosinate.

When used in tank mixtures with glufosinate herbicide, 0.75 oz. SOLIDA herbicide will deliver improved burndown and/or limited residual activity on the following weeds, as compared to glufosinate used alone:

- Velvetleaf
- Pigweed, redroot
- Lambsquarters, common
- Foxtail (giant, yellow)

#### **For Additional Control of Kochia**

SOLIDA herbicide may be tank mixed with 1/3 to 2/3 pint per acre of "Starane" for improved control of kochia. Use higher rates when weed infestation is heavy. Refer to the specific "Starane" label for application timing and restrictions. SOLIDA herbicide may be tank mixed with "Starane" and additional 1/16 to 1/8 lb active ingredient dicamba (such as 2 to 4 fluid oz. of "Banvel" or "Clarity") for broader spectrum weed control.

#### **For Additional Control of Broadleaf Weeds**

SOLIDA herbicide may be tank mixed with 2 pints per acre of "Lumax" or 2 1/3 pints per acre of "Lexar" for improved burndown or residual control of several broadleaf weeds including common waterhemp, common ragweed, common lambsquarters, and velvetleaf. When applying mixtures of SOLIDA herbicide plus "Lumax" or "Lexar", the use of a nonionic surfactant is suggested. Refer to "Lumax" or "Lexar" labels for additional information regarding application timing, tank mixtures, adjuvants, and rotational crops.

#### **For Additional Control of Broadleaf Weeds**

SOLIDA herbicide may be tank mixed with 0.5 to 0.75 fluid ounces per acre of "Impact" plus atrazine at 0.375 to 1.5 pounds active per acre for improved burndown or residual control of several broadleaf weeds including common waterhemp, common ragweed, common lambsquarters, and velvetleaf. When applying mixtures of SOLIDA herbicide plus "Impact" at 0.5 fluid ounces per acre, the use of methylated seed oil is suggested. Refer to "Impact" label for additional information regarding application timing, tank mixtures, adjuvants, and rotational crops.

#### **RESTRICTIONS AND PRECAUTIONS**

- SOLIDA may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.
- SOLIDA may be applied to corn previously treated with non-organophosphate soil insecticides regardless of soil type.

- Allow at least 60 days between a preemergence or preplant application of SOLIDA and application of organophosphate insecticide since crop injury may result. Do not apply SOLIDA within 45 days of crop emergence where an organophosphate insecticide was applied as in-furrow treatment since crop injury may occur.
- Do not tank mix SOLIDA with foliar-applied organophosphate insecticides such as "Lorsban," malathion, parathion, etc., as severe crop injury may occur.
- Do not tank mix SOLIDA with "Basagran" or severe crop injury may occur.
- Do not graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of SOLIDA application.
- Do not irrigate SOLIDA into coarse soils at planting time when soils are saturated.
- Injury or loss of desirable trees or vegetation may result from failure to observe the following:
  - Do not apply SOLIDA or drain or flush application equipment on or near desirable trees or other plants, or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.
  - Do not use on lawns, walks, driveways, tennis courts, or similar areas.
  - Prevent drift or spray onto desirable plants.
  - Do not contaminate any body of water.
  - Thoroughly clean application equipment immediately after use.
- Do not treat frozen soil.
- Do not apply through any type of irrigation system.
- Do not use flood or furrow irrigation to apply SOLIDA herbicide.

Crop injury may occur following an application of SOLIDA herbicide if there is a prolonged period of cold weather and/or in conjunction with wet soils.

#### CHEMIGATION

Do not apply SOLIDA herbicide through any type of irrigation system in field corn.

#### GROUND APPLICATION

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. Select nozzles and pressure that deliver MEDIUM spray droplets, as indicated, for example, by ASABE Standard S572.1. Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds. For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height suggested in manufacturer's specifications. Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

#### AERIAL APPLICATION

Aerial application is not permitted in the states of California and New York. Use MEDIUM or COARSE nozzles that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA. Do not apply during a temperature inversion, when wind speed is less than 3 mph or above 10 mph, or when conditions favor poor coverage and/or off-target spray drift. (See "Additional Use Information" section of this label.)

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## COTTON/SOYBEAN – PREPLANT ONLY

### APPLICATION INFORMATION

#### Rate

Apply SOLIDA herbicide at 1.0 ounce per acre.

#### Timing to Crop

SOLIDA herbicide may be applied preplant after fall harvest through early spring 30 days or more prior to planting, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

#### Burndown Tank Mixtures

SOLIDA herbicide may be used as a preplant residual burndown treatment and may be tank mixed with other herbicides that are registered for preplant in cotton/soybean, including glyphosate, paraquat, glufosinate, 2,4-D LVE, and dicamba. Read and follow all instructions on this label and the labels of any tank mix partner before using in mixtures with SOLIDA herbicide.

If the instructions on the tank mix label conflict with this SOLIDA herbicide label, do not use in a tank mixture with SOLIDA herbicide. Always follow directions of the most restrictive label.

#### Sequential Application – Soybeans

SOLIDA herbicide may be used in a sequential herbicide program in soybean. Apply SOLIDA herbicide for burndown and residual weed control 30 days or more prior to planting. Refer to the product labels for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

#### Additional Control of Grass and Broadleaf Weeds

SOLIDA herbicide may be tank mixed with full or reduced rates of preplant herbicides registered for cotton and soybean.

### SPRAY ADJUVANTS

For control of emerged weeds, application of SOLIDA herbicide must contain an appropriate adjuvant. If applied in a tank mix combination with a glyphosate herbicide product such as Glyphos® X-TRA or a glufosinate product such as Liberty® that contains a built-in adjuvant system, no additional surfactant needs to be added. Product must contain only EPA-exempt ingredients.

#### *Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)*

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

#### *Nonionic Surfactant (NIS)*

- Apply at 0.25% v/v (1 qt per 100 gallons spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

#### *Ammonium Nitrogen Fertilizer*

In addition to a spray adjuvant, an ammonium nitrogen fertilizer may be used.

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- Use 2 qt per acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 lb per acre of a spray-grade ammonium sulfate (AMS).

### **Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product labeling for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with SOLIDA herbicide unless instructed to do so on Cheminova labeling.

### **Mixing Instructions**

#### **Fertilizer Carrier Instructions**

SOLIDA herbicide may be mixed with water or pre-dissolved in water and added to liquid fertilizer for preemergence application. When using liquid fertilizer as the carrier, always pre-slurry SOLIDA herbicide in water before adding fertilizer solutions. Add the SOLIDA herbicide slurry to the final complete liquid fertilizer mixture – do not add SOLIDA herbicide during the fertilizer mixing process.

Always use good agitation while adding the SOLIDA herbicide slurry to liquid fertilizers and maintain good agitation until sprayed. When using liquid fertilizer as the carrier, conduct a compatibility test with all components prior to mixing.

Do not use with spray additives or liquid fertilizer carriers that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0-8.0 allow for optimum stability of SOLIDA herbicide.

### **Ground Application**

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. For best performance, select nozzles and pressure that deliver MEDIUM spray droplets, as indicated, for example, by ASABE Standard S572.1. Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds.

For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height recommended in manufacturers' specifications.

### **Aerial Application**

Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA.

Do not apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off target spray movement. (See "Additional Use Information" section of this label.)

### **RESTRICTIONS AND PRECAUTIONS**

- Do not plant cotton or soybean fewer than 30 days following an application of SOLIDA herbicide
- Do not apply more than a total of 1.0 ounce active ingredient (4 ounces product) rimsulfuron per acre per crop year from all sources.

- Do not apply preemergence to crops planted into coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.
- Do not apply through any type of irrigation system
- Do not graze, feed forage, grain, or fodder (stover) from treated areas to livestock within 30 days of SOLIDA herbicide application.
- Allow at least 3 weeks between preemergence applications of SOLIDA herbicide and postemergence applications of rimsulfuron-containing products.
- SOLIDA herbicide may interact with certain insecticides applied to soybean, cotton, or corn. Crop response varies with field crop, insecticide used, insecticide application method, and soil type.
- SOLIDA herbicide may be applied to crops previously treated with "Fortress," "Aztec," or "Force" insecticides or other nonorganophosphate (OP) soil insecticides regardless of soil type.
- Preplant/Preemergence applications of SOLIDA herbicide where an application of "Nufos," or "Thimet" is planned may cause unacceptable crop injury, especially on soils of less than 4% organic matter.
- Do not tank mix SOLIDA herbicide with bentazon ("Basagran") or severe crop injury may occur.
- Crop injury may occur following an application of SOLIDA herbicide if there is a prolonged period of cold weather and/or in conjunction with wet soils.
- Do not apply to frozen soil
- Do not contaminate any body of water
- Thoroughly clean application equipment immediately after use. (See Sprayer Cleanup section of this label for instructions.)

To avoid injury or loss of desirable trees or vegetation observe the following:

- Do not apply SOLIDA herbicide or drain or flush application equipment on or near desirable trees or other plants, on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Prevent drift or spray to desirable plants (See "Spray Drift" section of this label for instructions)
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Do not contaminate any body of water.





<b>2 OZ. MAXIMUM USE RATE</b>	
<b><i>Rotation Crop</i></b>	<b><i>Interval (months)</i></b>
Corn, field	Anytime
Potatoes	Anytime
Optimum GAT Soybeans	Anytime
Tomato	1
STS Soybeans***	4
Cereals, Winter (wheat)	4
Cereals, Spring (wheat, oats, barley)	9
Corn, pop or sweet	10
Cotton <sup>†</sup>	10
Cucumber	10
Flax	10
Soybeans	10
Snap beans, dry beans	10
Sunflower	10
Crops Not Listed	18
<sup>†</sup> The rotation interval must be extended to 18 months if drought conditions prevail after application and before the rotation crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.	
***Sulfonylurea Tolerant Soybean	

NOTE: SOLIDA herbicide should not be used in a tankmix or sequential application program with other soil residual ALS-inhibiting herbicides as the combined effects of these herbicides on the planting of subsequent crops have not been thoroughly investigated and injury to the following rotation crop may occur.

### ROTATIONAL CROP GUIDELINES FOR CERTAIN AREAS OF OREGON AND WASHINGTON

Field corn grown under sprinkler irrigation with a minimum of 18" of water per season. This rotation interval is for sand, loamy sand, and sandy loam soils having not more than 1.5% organic matter where a minimum of 18" of sprinkler irrigation is used on the previous corn crop. Injury to the rotated crop may occur if less than 18" of irrigation is used on the previous field corn crop. For tank mixtures, follow the most restrictive rotational crop guideline.

The following rotational intervals should be observed when using SOLIDA herbicide on field corn (Oregon and Washington):

<b><i>Rotation Crop</i></b>	<b><i>Interval (months)</i></b>
Alfalfa	4
Carrots	10
Cucumber	10
Grass, pasture, hay, seed	4
Mint	4
Onions	10
Peas	8

**For Rotation to Alfalfa:** SOLIDA herbicide in field corn not to exceed 1 ounce per use season in Adams, Grant, Douglas and Lincoln counties of Washington, and SOLIDA herbicide in field corn not to exceed 1.5 ounces per acre per use season in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in Washington and Morrow and Umatilla counties in Oregon.

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**For Rotation to Peas and Mints:** SOLIDA herbicide in field corn not to exceed 1.5 ounces per acre per use season in all areas.

## APPLICATION INFORMATION

For broadcast applications, make a single application of SOLIDA herbicide at 4 ounces per acre per year. For improved weed management, SOLIDA herbicide should be applied in tank mixture with other registered preemergence herbicides.

To help ensure uniform coverage, use a minimum of 10 gallons of spray solution per acre. Nozzle selection should meet manufacturer's spray volume and pressure instructions for preemergence or postemergence herbicide applications.

Apply only to crops that have been established for one full growing season and are in good health and vigor.

SOLIDA herbicide may also be applied by certain chemigation methods, such as microsprinkler. However, do not apply by overhead, flood, or drip irrigation. Avoid direct or indirect spray contact with crop foliage or fruit, except undesirable suckers.

Do not use SOLIDA herbicide in a spray solution with a pH of below 4.0 or above 8.0 with spray additives that buffer the pH to below 4.0 or above 8.0, since degradation of SOLIDA herbicide may occur.

## PRE-HARVEST INTERVAL (PHI)

CROP GROUP	PRE-HARVEST INTERVAL (PHI)
<b>Citrus Fruit:</b> Calamondin; Citrus citron; Citrus hybrids (includes chironja, tangelo, tangor); Grapefruit; Kumquat; Lemon; Lime; Mandarin (tangerine); Orange (sweet and sour); Pummelo; Satsuma mandarin	3 days
<b>Pome Fruit:</b> Apple; Crabapple; Loquat; Mayhaw; Pear; Oriental pear; Quince	7 days
<b>Tree Nuts:</b> Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Hickory nut; Macadamia nut (bush nut); Pecan; Pistachio; Walnut (black and English)	14 days
<b>Stone Fruit:</b> 14 days Apricot; Cherry (sweet and tart); Nectarine; Peach; Plum; Plum (Chickasaw); Plum (Damson); Plum (Japanese); Plumcot; Prune (fresh)	14 days
<b>Grapes</b>	14 days

## WEEDS CONTROLLED

Susceptible weeds are controlled for 60 to 90 days after application of SOLIDA herbicide. Rainfall or irrigation is needed for herbicide activation. Length of control is a function of moisture for activation, soil temperature, soil texture, and amount of moisture after application.

When weeds are present at application, include a labeled burndown herbicide, such as glyphosate (Glyfos X-TRA or generic glyphosate), paraquat, or glufosinate, with an appropriate adjuvant. SOLIDA herbicide will help provide postemergence control of the weeds listed in this label. For best results, make postemergence applications to young, actively growing weeds and include a spray adjuvant.

Residual weed control may be reduced when SOLIDA herbicide is applied where heavy crop trash and/or weed residue exists.

Weed control may also be reduced when applications of SOLIDA herbicide are made to weeds under stress from drought, excessive water, temperature extremes, disease, or low humidity.

## PREEMERGENCE WEED CONTROL

## Grass Weeds

Barnyardgrass	<i>Echinochloa crus-galli</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Quackgrass	<i>Elymus repens</i>
Wheat, Volunteer	<i>Triticum aestivum</i>

## 3 Broadleaf Weeds

Chamomile, False	<i>Matricaria maritima</i>
Dandelion, common (seedling)	<i>Taraxacum officinale</i>
Filaree, Redstem	<i>Erodium cicutarium</i>
Fleabane, hairy	<i>Conyza bonariensis</i>
Groundsel, common	<i>Senecio vulgaris</i>
Henbit	<i>Lamium amplexicaule</i>
Kochia	<i>Kochia scoparia</i>
Mallow, common	<i>Malva neglecta</i>
Marestail/horseweed	<i>Conyza canadensis</i>
Mustard, Birdrape	<i>Brassica rapa</i>
Mustard, Black	<i>Brassica nigra</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Pigweed, Smooth	<i>Amaranthus hybridus</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>
Spurge, prostrate	<i>Chamaesyce prostrata</i>
Spurge, spotted	<i>Chamaesyce maculata</i>

### PREEMERGENCE PARTIAL WEED CONTROL†

## Grass Weeds

Wild Oat *Avena fatua*

### Broadleaf Weeds/Sedges

Cocklebur	<i>Xanthium spp.</i>
Dandelion, common (established)	<i>Taraxacum officinale</i>
Lambsquarters, common	<i>Chenopodium album</i>
Nightshade, Black	<i>Solanum nigrum</i>
Nightshade, Hairy	<i>Solanum sarrachoides</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Velvetleaf	<i>Abutilon theophrasti</i>

‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area.

## POSTEMERGENCE WEED CONTROL

**Grass Weeds (1-2 inches)**

Barley, Volunteer	<i>Hordeum vulgare</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, Annual	<i>Poa annua</i>
Crabgrass, large (1/2 inch)	<i>Digitaria sanguinalis</i>

Foxtail, Bristly	<i>Setaria verticillata</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Wheat, Volunteer	<i>Triticum aestivum</i>

#### Broadleaf Weeds (1-3 inches)

Chamomile, False	<i>Matricaria maritima</i>
Chickweed, common	<i>Stellaria media</i>
Henbit	<i>Lamium amplexicaule</i>
Kochia	<i>Kochia scoparia</i>
Mustard, Black	<i>Brassica nigra</i>
Mustard, Wild	<i>Sinapsis arvensis</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Pigweed, Smooth	<i>Amaranthus hybridus</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, Common	<i>Portulaca oleracea</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Wild Radish	<i>Raphanus raphanistrum</i>

#### POSTEMERGENCE PARTIAL WEED CONTROL†

##### Grass Weeds

Johnsongrass, seedling	<i>Sorghum halepense</i>
Millet, wild-proso	<i>Panicum miliaceum</i>
Oat, wild	<i>Avena fatua</i>
Quackgrass	<i>Elymus repens</i>
Stinkgrass	<i>Eragrostis ciliaris</i>

##### Broadleaf Weeds

Cocklebur	<i>Xanthium spp.</i>
Dandelion, common (>6 inches in diameter)	<i>Taraxacum officinale</i>
Lambsquarters, common	<i>Chenopodium album</i>
Mallow, common	<i>Malva neglecta</i>
Nightshade, hairy	<i>Solanum sarrachoides</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Pigweed, prostrate	<i>Amaranthus blitoides</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Thistle, Canada	<i>Cirsium arvense</i>
Velvetleaf	<i>Abutilon theophrasti</i>

† Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of weeds, and the environmental conditions following treatment

#### SPECIFIC WEED PROBLEMS

**COMMON DANDELION AND MALLOW:** SOLIDA herbicide provides excellent preemergence control of common dandelion and mallow germinating from seed. In high rainfall areas or where sprinkler irrigation is used, a second application may be needed to extend residual control throughout the growing season. When applications are made postemergence to these weeds,

always add a suitable burndown herbicide such as Glyphos X-TRA or paraquat. Small and medium-sized plants (up to 6 inches in diameter) are controlled by postemergence applications of SOLIDA herbicide plus a burndown herbicide; however, plants that are larger than 6 inches in diameter may only be suppressed and may require a second application 4 to 6 weeks later.

**MARESTAIL/HORSEWEED AND FLEABANE:** Where maretail (horseweed) and fleabane are the target weeds, applications prior to emergence provide best results. This may require a fall application to help prevent fall-germinating seedlings from becoming established during the winter. A foliar active herbicide with activity on fleabane and maretail/horseweed (such as paraquat, glyphosate (such as Glyphos X-TRA®), and glufosinate) must be tank mixed with SOLIDA herbicide for best control and resistance management. After fall application, a second application in the spring may be required to provide extended weed control in the summer. Where SOLIDA herbicide is applied for control of maretail/horseweed and fleabane, another soil-residual herbicide should be included as a tank mix or rotational partner to aid in resistance management.

**PUNCTUREVINE:** For best results, apply early in the spring when you can expect rainfall or overhead irrigation to move SOLIDA herbicide into the weed root zone before puncturevine germinates. Puncturevine emerges over a long period of time and late-season germinations may not be controlled.

**YELLOW NUTSEDGE:** SOLIDA herbicide provides suppression of yellow nutsedge. To obtain the most effective results, use the highest rate allowed based on width of your spray band and make two applications. For applications made postemergence to nutsedge, always add the appropriate rate of glyphosate (such as Glyphos X-TRA®) and an effective adjuvant if required. On soils with high organic matter (6% or higher) always apply postemergence to weeds since preemergence applications are not as effective on these soils.

**Application Timing – Yellow Nutsedge**

**Preemergence plus Early Postemergence:** Make the preemergence application when you can expect rainfall or overhead irrigation to move SOLIDA herbicide into the nutsedge root zone prior to nutsedge emergence. Make a second application when emerging nutsedge is 2 to 4 inches tall.

**Postemergence plus Postemergence:** Make first application when emerging nutsedge is 2 to 4 inches tall. Repeat application 14 days later. **Note:** If yellow nutsedge is greater than 6 inches tall at the first application, weed control effectiveness will be greatly reduced.

**ANNUAL SUMMER GRASS Weeds (such as Barnyardgrass, Green Foxtail, and Crabgrass):** Where sprinkler irrigation is used, a fall or early spring application of SOLIDA herbicide will not provide season-long control of summer grasses like foxtail, barnyardgrass, and crabgrass. For best results, use SOLIDA herbicide with a suitable tank mix herbicide such as oryzalin or pendimethalin. A second application may be needed to provide extended control of summer grasses.

**USE PRECAUTIONS**

- Direct sprays to minimize spray contact with fruit or foliage.
- Avoid spray drift to any adjacent crops or desirable plants as injury may occur.
- Draining or flushing equipment on or near desirable trees or other plants, or in areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots may injure these plants. Trees or desirable plants whose roots extend into a treated crop use area may be injured.
- For best results, maintain spray tank solution at pH 5 to 7.

- Do not apply to frozen or snow-covered soil. Crop injury may occur from applications made to poorly drained soils.
- If the selected companion herbicide has a ground or surface water advisory, consider the advisory when using the companion herbicide.

**Diuron-Containing Products (Washington and Oregon):** On coarse-textured soils where crops are grown under sprinkler irrigation, avoid using diuron-containing products (such as Karmex® XP or Direx® 4L) as a tank-mix partner with SOLIDA herbicide between June 1 and September 30 since crop injury may result. SOLIDA herbicide tank mixed with diuron products can be used in the fall (after September 30) or early spring when temperatures are cool to moderate.

#### **CROP ROTATION – (Fruit, Nut, and Vine Crops)**

Do not plant any crops, except field corn, tomatoes, potatoes, and those listed on this label in the PRODUCT INFORMATION section, within one year of the last SOLIDA herbicide application. Prior to planting, fields to be rotated to the above crops should have a thorough soil mixing – for example, two diskings, or a plowing and a disking. To help ensure rotational crop safety, a field bioassay should be completed prior to planting any other desired crops. The results of this bioassay may require the crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

#### **MICRO-SPRINKLER CHEMIGATION – (Fruit, Nut, and Vine Crops)**

SOLIDA herbicide may be applied via micro-sprinkler chemigation. The chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must also contain a functional (normally closed) solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticide(s) and capable of being fitted with a system interlock. **Do not apply SOLIDA herbicide through any *other* chemigation equipment.**

#### **USE PRECAUTIONS FOR CHEMIGATION – (Fruit, Nut, and Vine Crops)**

- Do not connect an irrigation system used for SOLIDA herbicide application to a public water system.
- Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, or over-tolerance pesticide residues in the crop. Therefore, to ensure that the mixture is applied evenly at the labeled rate, use sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water pattern.
- Do not permit run-off during chemigation.
- Continuous agitation in the mix tank is needed to keep the product from settling. If settling does occur, thoroughly re-agitate the tank mixture before using.



## POTATOES

### APPLICATION INFORMATION

#### PREEMERGENCE APPLICATIONS

For best results, apply SOLIDA herbicide at 1 to 1-1/2 ounces of product per acre immediately after hilling, drag-off, or reservoir tillage (dam/dike operation) to a clean, newly prepared seedbed.

To activate SOLIDA herbicide in the soil, supply moisture by a single rainfall event or apply sprinkler irrigation of 1/3 to 1 inch (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch), within 5 days after application to move SOLIDA herbicide 3 inches deep into the soil profile. Activating sprinkler irrigation is required regardless of the soil moisture level at planting or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying SOLIDA herbicide postemergence would result in better weed control.

If a clean, newly prepared seedbed free of emerged or germinating weeds does not occur, and weeds are present at the application, add a spray adjuvant to the spray mix. Control may not be adequate for weeds that have an established root system before activation of SOLIDA herbicide.

**Do not apply SOLIDA herbicide within 30 days of potato harvest.**

**Do not exceed 2.5 oz of SOLIDA herbicide per acre per crop season.**

#### TANK MIXTURES – PREEMERGENCE APPLICATIONS

SOLIDA herbicide may be tank mixed with herbicides labeled for use on potatoes (such as "Eptam® 7E", "Prowl®", "Prowl® H2O", "Lorox®" DF, "Cinch®", or "Dual II Magnum®", Glyphos X-TRA® products registered for potatoes) in accordance with the most restrictive of label limitations and precautions. When tank mixing SOLIDA herbicide with another potato herbicide(s), read and follow all use directions, restrictions, and precautions of both SOLIDA herbicide and the tank mix partner(s).

SOLIDA herbicide may also be used in three-way tank mix combinations with the above herbicide(s). If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide.

#### SOLIDA herbicide plus Metribuzin

Apply a tank mix combination of SOLIDA herbicide at 1 to 1-1/2 oz per acre and metribuzin at 1/4 to 3/5 lb active ingredient per acre for better control of such weeds as kochia, Russian thistle, and common lambsquarters. For best results apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow the metribuzin label for your area.

#### SOLIDA herbicide plus Eptam® 7E

Apply a tank mix of SOLIDA herbicide at 1 to 1-1/2 oz per acre and Eptam® 7E at label rates for better control of weeds such as hairy nightshade and crabgrass. For best results apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Since the rates and incorporation methods of Eptam® 7E vary by region, follow the instructions for your region. The procedure is to incorporate a tank mix of Eptam® 7E + SOLIDA herbicide using irrigation, and not equipment, to prevent poor weed control from deep incorporation of the SOLIDA herbicide.

If your area does not allow incorporation using irrigation, then apply Eptam® 7E and SOLIDA

herbicide in a split application. Read and follow both product labels for your area.

**SOLIDA herbicide plus pendimethalin (such as Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin)**

Apply as a tank mix combination of SOLIDA herbicide at 1 to 1-1/2 oz per acre and Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin at label rates for better control of such weeds as kochia, crabgrass, and common lambsquarters. For best results apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow the Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin label for your area.

**SOLIDA herbicide plus Linuron (such as Lorox® DF)**

Apply a tank mix combination of SOLIDA herbicide at 1 to 1-1/2 oz per acre and Lorox® DF at 1 to 4 lb per acre for better control of such weeds as common lambsquarter and common ragweed. For best results apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate. Read and follow the Lorox® DF label for your area.

**SOLIDA herbicide plus S-Metolachlor**

Apply a tank mix combination of SOLIDA herbicide at 1 to 1-1/2 oz per acre and S-Metolachlor at 1 to 2 pints per acre for better control of such weeds as yellow nutsedge and black nightshade. For best results apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow both product labels for your area.

**POSTEMERGENCE APPLICATIONS – POTATOES**

For postemergence applications, apply SOLIDA herbicide at 1 to 1-1/2 oz per acre to young, actively growing weeds after crop emergence. Typically, small weeds (less than 1 inch in height or diameter) that are actively growing at application are most easily controlled

Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application of SOLIDA herbicide. Symptoms usually disappear within 5 to 15 days.

For best results with SOLIDA herbicide postemergence, rainfall or sprinkler irrigation of 1/3 to 1 inch (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch), no sooner than 4 hours, but not more than 5 days after application, will activate SOLIDA herbicide in the soil and help provide control of subsequent flushes of annual weeds.

**TANK MIXTURES (POTATOES) – POSTEMERGENCE APPLICATIONS**

SOLIDA herbicide may be tank mixed with pesticide products labeled for use on potatoes (such as Eptam® 7E and metribuzin) in accordance with the most restrictive of label limitations and precautions. When tank mixing SOLIDA herbicide with another potato pesticide(s), read and follow all use directions, restrictions, and precautions of both SOLIDA herbicide and the tank mix partner(s).

SOLIDA herbicide may also be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide.

### **SOLIDA herbicide plus Foliar Fungicides**

SOLIDA herbicide may be tank mixed with other suitable registered fungicides on potatoes (such as "KOVERALL", mancozeb, or chlorthalonil).

Read and follow all manufacturers' label instructions for the companion fungicide. If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide.

### **SOLIDA herbicide plus Metribuzin**

Apply a tank mix combination of SOLIDA herbicide at 1 to 1-1/2 oz per acre and metribuzin at 1/5 to 1/2 lb active ingredient per acre for improved weed control of such weeds as Russian thistle, common lambsquarters and triazine-resistant weeds. Use a nonionic surfactant (NIS) at 0.125% v/v (1 pints/100 gal. of water). The addition of adjuvants to postemergence metribuzin applications may reduce crop tolerance. Adjuvants should be used with caution.

When possible, avoid postemergence applications on metribuzin-sensitive varieties or if the crop is under stress. Read and follow both product labels for your area. **Note:** Crop oil concentrate (COC) or methylated seed oil (MSO) should not be used for tank mix combinations with SOLIDA herbicide plus metribuzin.

### **SOLIDA herbicide plus "Eptam 7E"**

Apply SOLIDA herbicide at 1 to 1.5 ounce per acre in tank mix with 1 pint per acre of Eptam® 7E herbicide. Include 1% volume/volume (1 gal. per 100 gal. spray solution) of either a modified seed oil adjuvant (MSO) or 0.5% volume/volume (0.5 gal. per 100 gal. spray solution) of an organo-silicon/modified seed oil blend (OS/MSO – such as Dyne-Amic®, Rivet™, or Phase®). Include a 2 lb/acre of a spray-grade ammonium sulfate (AMS).

For best results, rainfall or sprinkler irrigation of 1/3 to 1 inch (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch), no sooner than 4 hours after application, but not more than 1 day after application.

Additional Eptam® 7E can be added during the water in process if desired (read and follow all use directions, restrictions, and precautions on the Eptam® 7E label before use. If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide).

### **Precautions:**

Crop injury can occur (leaf burn and temporary yellowing) when applications are made under high temperatures. Addition of fungicides may increase the level of crop injury. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed and may be more variable in weed control.

### **SEQUENTIAL APPLICATIONS – POTATOES**

Depending upon rainfall or other environmental conditions, and the density of the top growth of the potato variety (those with poor top growth such as Norkotah), the annual weeds may have a second flush of germinating seedlings, and treated perennials may produce new growth from underground roots or stems. To maximize control of such weeds, it may be necessary to apply SOLIDA herbicide a second time 14 to 28 days after the first application (typically, make applications to small weeds that are less than 1 inch in height or diameter that are actively growing). The combined rate of the

applications cannot exceed 2.5 oz SOLIDA herbicide per acre during the same growing season.

### POTATOES GROWN FOR SEED

SOLIDA herbicide may be used on potatoes grown for seed that use field-grown tubers as the planted seed piece and are at least the progeny of the first field planting. (First field planting utilizes laboratory-tested stocks, which may be tissue-cultured plantlets, greenhouse-produced microtubers, minitubers, stem cuttings, or line selections.)

Apply SOLIDA herbicide by any of the following methods:

- Preemergence at 1.5 oz per acre
- Postemergence at 1.0 to 1.5 oz per acre
- In a sequential application preemergence at 1.0-1.5 oz per acre, followed by postemergence at 1.0 oz per acre
- Postemergence at 1.0 oz per acre followed by postemergence at 1.0 oz per acre.

Do not exceed 2.5 oz per acre of SOLIDA herbicide in the same growing season.

To activate SOLIDA herbicide preemergence, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/3 to 1 inch (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch) within 5 days after application to move SOLIDA herbicide 2 to 3 inches deep into the soil profile.

### Restrictions

- Do not apply to plants suffering stress from lack of moisture, cold, herbicide injury, and insect or disease injury.
- Do not use on potatoes grown for seed if these are grown from microtubers or transplants. Depending on geography, these may be referred to as Generation 1, Nuclear, Elite 1, or Pre-Elite.
- The rotational crop interval for Spring Barley is extended to 18 months due to the generally shorter growing seasons and different cultural practices in seed production in the states of California, Idaho, Oregon, Montana, South Dakota, Washington, Colorado, and parts of North Dakota (all counties in North Dakota except Pembina, Towner, Walsh, Grand Forks, Trail, and Cass).

### Precautions

- The rotational crop interval listed in the SOLIDA herbicide label may need to be extended to 18 months if seed potato production practices decrease water and/or time for SOLIDA herbicide breakdown. Practices that may shorten the breakdown are late planting or less frequent irrigations as compared to commercial production practices. Potatoes can be planted at anytime.
- Consider informing your state seed certification agency or inspector that SOLIDA herbicide has been applied. Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application. These symptoms may appear similar to virus-like symptoms (such as chlorosis, leaf crinkling, pinching of terminal leaflet) but will usually disappear within 5 to 15 days of application.

## WEEDS CONTROLLED - POTATO

## PREEMERGENCE CONTROL

## Grass Weeds

Barnyardgrass	<i>Echinochloa crus-galli</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Wheat, Volunteer	<i>Triticum aestivum</i>

## Broadleaf Weeds

Chamomile, False	<i>Matricaria maritima</i> L.
Filaree, redstem	<i>Erodium cicutarium</i>
Henbit	<i>Lamium amplexicaule</i>
Kochia	<i>Kochia scoparia</i>
Mustard, Birdsrape	<i>Brassica rapa</i> L.
Mustard, Black	<i>Brassica nigra</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Pigweed, Smooth	<i>Amaranthus hybridus</i>
Purslane, Common	<i>Portulaca oleracea</i>

## PREEMERGENCE PARTIAL CONTROL†

## Grass Weeds

Crabgrass	<i>Digitaria spp.</i>
Wild Oat	<i>Avena fatua</i>

## Broadleaf Weeds

Cocklebur	<i>Xanthium</i> spp.
Lambsquarters, Common	<i>Chenopodium album</i>
Nightshade <sup>†</sup> , Black	<i>Solanum nigrum</i>
Nightshade, Hairy	<i>Solanum sarrachoides</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Velvetleaf	<i>Abutilon theophrasti</i>

† Eastern Black Nightshade (*Solanum ptycanthum*) is NOT controlled or suppressed

‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area.

## POSTEMERGENCE CONTROL

## Grass Weeds

Barley, Volunteer	<i>Hordeum vulgare</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, Annual	<i>Poa annua</i>
Crabgrass	<i>Digitaria spp</i>
Foxtail, Bristly	<i>Setaria verticillata</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>

Wheat, Volunteer

*Triticum aestivum*

### Broadleaf Weeds

Chamomile, False  
Chickweed, Common  
Henbit  
Kochia  
Mustard, Birdrape  
Mustard, Black  
Mustard, Wild  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, Common  
Shepherd's purse  
Wild Radish

*Matricaria maritima* L.  
*Stellaria media*  
*Lamium amplexicaule*  
*Kochia scoparia*  
*Brassica rapa* L.  
*Brassica nigra*  
*Sinapsis arvensis*  
*Amaranthus retroflexus*  
*Amaranthus hybridus*  
*Portulaca oleracea*  
*Capsella bursa-pastoris*  
*Raphanus raphanistrum*

### POSTEMERGENCE PARTIAL CONTROL ‡

#### Grass Weeds

Johnsongrass, seedling  
Millet, wild-proso  
Oat, wild  
Stinkgrass  
Yellow Nutsedge

*Sorghum halepense*  
*Panicum miliaceum*  
*Avena fatua*  
*Eragrostis ciliaris*  
*Cyperus esculentus*

#### Broadleaf Weeds

Thistle, Canada<sup>†</sup>  
Cocklebur  
Lambsquarters, Common  
Morningglory, Ivyleaf  
Nightshade, Hairy  
Nightshade\*<sup>†</sup>, Black  
Pigweed Prostrate  
Quackgrass<sup>†</sup>  
Ragweed, Common  
Smartweed, Pennsylvania  
Velvetleaf  
Volunteer Alfalfa\*\*

*Cirsium arvense*  
*Xanthium* spp.  
*Chenopodium album*  
*Ipomoea hederacea*  
*Solanum sarrachoides*  
*Solanum nigrum*  
*Amaranthus blitoides*  
*Elymus repens*  
*Ambrosia artemisiifolia*  
*Polygonum pennsylvanicum*  
*Abutilon theophrasti*  
*Medicago sativa*

\* Eastern black nightshade (*Solanum ptycanthum*) is NOT controlled or suppressed.

\*\* Except in California

‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of weeds, and the environmental conditions following treatment.

† See Specific Weed Problems

### AERIAL APPLICATION

#### (See also SPRAY DRIFT)

- Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA. In California use a minimum of 10 GPA.
- Do not apply during a temperature inversion, when winds are gusty or when conditions favor poor coverage and/or off-target spray movement.

- 31/59
- Do not apply by air in the state of California, except in Modoc or Siskiyou counties. Do not apply by air in the state of New York.

### CHEMIGATION – POTATOES

SOLIDA herbicide can be applied using center-pivot, lateral-move, solid-set, or hand-move irrigation systems in potatoes. Do not apply SOLIDA herbicide using any other type of irrigation system. Check irrigation systems to ensure uniform application of water to all areas. Failure to apply SOLIDA herbicide uniformly may result in crop injury and/or poor weed control.

For best results, use the highest labeled rate and apply preemergence to early postemergence to the weeds (weeds less than 1 inch tall). If weeds are present at application, add a nonionic surfactant containing at least 80% active ingredient to the spray mix at 1 to 2 pints/acre.

SOLIDA herbicide may be mixed in a supply tank with water, fertilizer, or other appropriate agricultural chemicals. Maintain continuous agitation in the injection nurse tanks during application.

For solid set and hand move irrigation systems, apply SOLIDA herbicide at the beginning of the set and then apply 1/3 to 1 inch of water for activation (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, and clay soils apply at least 1 inch).

If you have questions about calibrating chemigation equipment, contact State Extension Service specialists, equipment manufacturers, or other experts. If the chemigation equipment needs adjustment, only the custodian responsible for its operation or someone under the supervision of that custodian should make the necessary adjustments.

### IRRIGATION SYSTEM REQUIREMENTS

The irrigation system must contain the following:

- a functional check valve
- vacuum relief valve
- a low-pressure drain (to prevent water source contamination from backflow; should be located on the irrigation pipeline)
- functional interlocking controls (to automatically shut off the pesticide injection pump when the water pump motor stops)
- a metering pump, such as positive-displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

The pesticide injection pipeline must contain the following:

- a functional, automatic, quick-closing check valve (to prevent the flow of fluid back toward the injection pump)
- a functional, solenoid-operated valve (normally closed) located on the intake side of the injection pump (should be connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is shut down either automatically or manually)

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when pesticide distribution is adversely affected by a decrease in water pressure.

## CHEMIGATION PRECAUTIONS

Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, and pesticide residues in the crop that may be above tolerance limits. Therefore, to ensure that the mixture is applied evenly at the labeled rate, use sufficient water and apply the mixture for the proper length of time.

- Do not permit run-off during chemigation.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Do not connect an irrigation system (including greenhouse systems) used for SOLIDA herbicide application to a public water system.

## SOLIDA HERBICIDE ROTATIONAL CROP GUIDELINES – POTATO

For crops listed below, planting prior to the interval shown may result in crop injury when using this product. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted unless supplemental sprinkler irrigation has been applied and totals greater than 15" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (months)
Alfalfa**	4
Barley, Spring*	9
Beans, Dry	10
Carrots (Kern County, CA)**	4
Carrots**	10
Corn, Field	Anytime
Corn, Popcorn	10
Corn, Sweet	10
Cotton	10
Cover Crops (erosion control)	4
Cucumber	10
Garlic	6
Grass, pasture, hay, seed**	4
Mint**	4
Oats, Spring	9
Onions**	10
Peas**	8
Potatoes	Anytime
Sunflowers	10
Soybeans	4
Tomatoes	Anytime
Wheat, Spring	9
Wheat, Winter	4
Crops Not Listed	18

\* Idaho – 18 months for Teton County, Caribou County, Madison County East of Hwy. 20, and Fremont County East of Hwy. 20. Colorado – Alamosa, Conejos, Costilla, Rio Grande and Saguache Counties: 1.5 oz or less SOLIDA herbicide per acre per season – 9 months; greater than 1.5 oz of SOLIDA herbicide per acre per season – 18 months

\*\* Potatoes grown in the counties listed below in OR and WA under sprinkler irrigation with a minimum of 18 inches of water per season. All other areas may be rotated to alfalfa at 18 months after application. This rotation interval is for sand, loamy sand, and sandy loam soils having not more than 1.5% organic matter where a minimum of 18 inches of sprinkler irrigation is used on the previous potato crop. Injury to the rotated crop may occur if less than 18 inches of irrigation is used on the



previous potato crop. For tank mixtures, follow the most restrictive rotational crop guideline.

**\*\* Specific Rotation for Crops marked \*\*:**

For Rotation to Alfalfa: SOLIDA herbicide in potatoes not to exceed 1 ounce per use season in Adams, Grant, Douglas and Lincoln Counties of Washington, and SOLIDA herbicide in potatoes not to exceed 1.5 ounces per acre per use season in Benton, Franklin, Klickitat, Walla Walla, and Yakima Counties in Washington and Morrow and Umatilla Counties in Oregon.

For Rotation to Onions and Carrots: SOLIDA herbicide in potatoes not to exceed 1.5 ounces per acre per use season in Adams, Grant, Douglas and Lincoln Counties of Washington, and SOLIDA herbicide in potatoes not to exceed 2.5 ounces per acre per use season in Benton, Franklin, Klickitat, Walla Walla, and Yakima Counties in Washington and Morrow and Umatilla Counties in Oregon.

For Rotation to Grass Crops Grown for Seed, Hay or Pasture: SOLIDA herbicide in potatoes not to exceed 1.5 ounces per acre per use season in Adams, Grant, Douglas, and Lincoln Counties of Washington, and SOLIDA herbicide in potatoes not to exceed 2.5 ounces per acre per use season in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in Washington and Morrow and Umatilla Counties in Oregon.

For Rotation to Peas and Mints: SOLIDA herbicide in potatoes not to exceed 1.5 ounces per acre per use season in all areas.

**NOTE:** SOLIDA herbicide should not be used in a tank mix or sequential application program with other soil residual ALS-inhibiting herbicides on potatoes as the combined effects of these herbicides on the planting of subsequent crops have not been thoroughly investigated and crop injury may occur.

## RESTRICTIONS – Potatoes

- Do not apply SOLIDA herbicide on potatoes within 30 days of harvest.
- Do not exceed 2.5 oz of SOLIDA herbicide per acre on potatoes during the same growing season.
- Do not apply to sweet potatoes or yams.
- Do not use SOLIDA herbicide on potatoes grown for seed, except as directed on this labeling or supplemental labeling.
- Do not apply to potatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to potatoes growing in fields.

## TOMATOES (DIRECT-SEEDED AND TRANSPLANT)

### PREEMERGENCE APPLICATIONS

For preemergence applications to the crop, apply SOLIDA herbicide after seeding at 2.0 to 4.0 ounces product per acre.

To activate SOLIDA herbicide in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/2 to 1 inch (sandy soils apply at least 1/2-inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch) within 5 days after application to move SOLIDA herbicide 2 to 3 inches deep into the soil profile. Activating sprinkler irrigation is required regardless of the soil moisture level at planting or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying SOLIDA herbicide postemergence may result in better weed control.

If a clean, newly prepared seedbed, free of emerged or germinating weeds does not occur and weeds are present at application, the addition of a spray adjuvant may improve weed control (see the SPRAY ADJUVANT section of this label for additional information). Control may not be adequate for weeds that are greater than 1 inch in height or diameter or weeds that have an

established root system before activation of SOLIDA herbicide.

### POSTEMERGENCE APPLICATIONS

For postemergence applications, apply SOLIDA herbicide at 1.0 to 2.0 ounces product per acre (use 2.0 ounces per acre for longer residual) to young, actively growing weeds after the crop has reached the cotyledon stage. Optimum performance is obtained when weeds are less than 1 inch in height or diameter and are actively growing.

Use a surfactant at a minimum rate of 0.25% V/V (2 pints/100 gallons of water). The use of crop oil concentrate, methylated seed oils, nitrogen fertilizer solution, or nonionic surfactant rates above 0.25% V/V may result in temporary crop chlorosis (yellowish color). Symptoms usually disappear within 5 to 15 days.

Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, extreme temperature variations, or saturated or water-logged soils), temporary crop chlorosis (yellowish color) may occur after application with SOLIDA herbicide. Symptoms usually disappear within 5 to 15 days.

For best results with SOLIDA herbicide postemergence, rainfall or sprinkler irrigation of 1/2 to 1 inch (sandy soils apply at least 1/2, sandy loams apply at least 1/2, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch), no sooner than 4 hours but not more than 5 days after application, will activate SOLIDA herbicide in the soil and help provide control of subsequent flushes of annual weeds.

Postemergence applications of SOLIDA herbicide should be made after the tomatoes reach the cotyledon stage.

### SEQUENTIAL APPLICATIONS TOMATOES

Annual weeds at times may have multiple flushes of seedlings, or treated weeds may sometimes regrow from underground stems or roots, depending upon rainfall and other environmental conditions. To maximize control of such weeds, it may be necessary to use sequential applications of SOLIDA herbicide.

### PREEMERGENCE FOLLOWED BY POSTEMERGENCE

Applications of SOLIDA herbicide may be applied preemergence followed by a single or multiple applications postemergence.

**Note:** For sequential applications the total amount of SOLIDA herbicide cannot exceed 4.0 oz product per acre per year on a broadcast basis.

### POSTEMERGENCE FOLLOWED BY POSTEMERGENCE

Multiple applications of SOLIDA herbicide may be applied postemergence, optimum control is seen when the first application is made to small actively growing weeds, followed by a second application 7 to 14 days later.

**Note:** For sequential applications the total amount of SOLIDA herbicide cannot exceed 4.0 oz product per acre per year on a broadcast basis.

### BAND APPLICATIONS – TOMATOES

SOLIDA herbicide can be applied preemergence and postemergence as a banded application. Use proportionally less spray mixture based on the soil area actually sprayed. See the "Preemergence Applications" and "Postemergence Applications" sections of this label for additional details on the use of SOLIDA herbicide.

### **TANK MIXTURES – TOMATOES**

SOLIDA herbicide may be tank mixed with pesticide products labeled for use on tomatoes in accordance with the most restrictive of label limitations and precautions. When tank mixing SOLIDA herbicide with another tomato pesticide(s), read and follow all use directions, restrictions, and precautions of both SOLIDA herbicide and the tank mix partner(s).

SOLIDA herbicide may also be used in three-way tank mix combinations with the above pesticide(s).

If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide. Tank mixtures with products that lower the spray solution pH may reduce weed control (such as LI700 surfactant).

### **SOLIDA herbicide plus Foliar Fungicides**

SOLIDA herbicide may be tank mixed with suitable registered fungicides (such as "KOVERALL", mancozeb, or chlorthalonil) on tomatoes. Tank mixtures with copper-containing fungicides may reduce weed control.

Read and follow all manufacturers' label instructions for the companion fungicide. If these instructions conflict with this SOLIDA herbicide label, do not use as a tank mix with SOLIDA herbicide.

### **TOMATOES: CALIFORNIA PREEMERGENCE APPLICATIONS**

For preemergence applications to the crop, apply SOLIDA herbicide after seeding at 2.0 to 4.0 oz product per acre. To activate SOLIDA herbicide in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/2 to 1 inch (sandy soils apply at least 1/2 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch) within 5 days after application to move SOLIDA herbicide 2 to 3 inches deep into the soil profile. Activating sprinkler irrigation is required regardless of the soil moisture level at planting, or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying SOLIDA herbicide postemergence may result in better weed control.

If a clean, newly prepared seedbed, free of emerged or germinating weeds does not occur and weeds are present at application, the addition of spray adjuvant may improve weed control (see the SPRAY ADJUVANT section of this label for additional information). Control may not be adequate for weeds that are greater than 1 inch in height or diameter or weeds that have an established root system before activation of SOLIDA herbicide.

### **POSTEMERGENCE APPLICATIONS**

For postemergence applications, apply SOLIDA herbicide at 2.0 oz product per acre to young, actively growing weeds after the crop has reached the cotyledon stage. Optimum performance is obtained when weeds are less than 1 inch in height or diameter and are actively growing.

Use a surfactant at a minimum rate of 0.25% V/V (2 pints/100 gallons of water). The use of crop oil concentrate, methylated seed oils, nitrogen fertilizer solution or nonionic surfactant rates above 0.25% V/V may result in temporary crop chlorosis (yellowish color). Symptoms usually disappear within 5 to 15 days.

Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high

temperatures, extreme temperature variations, or saturated or water-logged soils), temporary crop chlorosis (yellowish color) may occur after application of SOLIDA herbicide. Symptoms usually disappear within 5 to 15 days.

For best results with SOLIDA herbicide postemergence, rainfall or sprinkler irrigation of 1/2 to 1 inch (sandy soils apply at least 1/2 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch) no sooner than 4 hours but not more than 5 days after application will activate SOLIDA herbicide in the soil and help provide control of subsequent flushes of annual weeds.

Postemergence applications of SOLIDA herbicide should be made after the tomatoes reach the cotyledon stage.

## SEQUENTIAL APPLICATIONS

Annual weeds at times may have multiple flushes of seedlings, or treated weeds may sometimes regrow from underground stems or roots, depending upon rainfall and other environmental conditions. To maximize control of such weeds, it may be necessary to use sequential applications of SOLIDA herbicide.

## PREEMERGENCE FOLLOWED BY POSTEMERGENCE

Applications of SOLIDA herbicide may be applied Preemergence followed by single or multiple applications of Postemergence.

**Note:** For sequential applications the total amount of SOLIDA herbicide cannot exceed 4.0 oz product per acre year on a broadcast basis.

## POSTEMERGENCE FOLLOWED BY POSTEMERGENCE

Multiple applications of SOLIDA herbicide may be applied postemergence; optimum control is seen when the first application is made to small actively growing weeds followed by a second application 7 to 14 days later.

**Note:** For sequential applications the total amount of SOLIDA herbicide cannot exceed 4.0 oz product per acre per year on a broadcast basis.

### BAND APPLICATIONS – TOMATOES:

SOLIDA herbicide can be applied in a preemergence band at 2.0 to 4.0 oz product per acre (For example, 0.5 to 1.0 oz of product per conventional broadcast acre assuming 25% banding) followed by two separate postemergence band applications applied at 2 oz product per acre (For example, 0.5 oz of product per conventional broadcast acre assuming 25% banding) over the same sprayed area.

Do not make any more than three band applications of SOLIDA herbicide in one growing season.

## WEEDS CONTROLLED - TOMATO

## PREEMERGENCE CONTROL

## Grass Weeds

Barnyardgrass	<i>Echinochloa crus-galli</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Wheat, Volunteer	<i>Triticum aestivum</i>

## Broadleaf Weeds

Filaree, redstem	<i>Erodium cicutarium</i>
Henbit	<i>Lamium amplexicaule</i>
Kochia	<i>Kochia scoparia</i>
Mustard, Black	<i>Brassica nigra</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Pigweed, Smooth	<i>Amaranthus hybridus</i>
Purslane, Common	<i>Portulaca oleracea</i>

PREEMERGENCE PARTIAL CONTROL ±

## Grass Weeds

Crabgrass	<i>Digitaria</i> spp.
Wild Oat	<i>Avena fatua</i>

## Broadleaf Weeds

Cocklebur	<i>Xanthium</i> spp.
Lambsquarters, Common	<i>Chenopodium album</i>
Nightshade*, Black†	<i>Solanum nigrum</i>
Nightshade, Hairy	<i>Solanum sarrachoides</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Velvetleaf	<i>Abutilon theophrasti</i>

\* Eastern black nightshade (*Solanum ptycanthum*) is NOT controlled or suppressed

† See specific weed problems

‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area.

**POSTEMERGENCE CONTROL (weeds not to exceed 1 inch in height)**

## Grass Weeds

Barley, Volunteer	<i>Hordeum vulgare</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, Annual	<i>Poa annua</i>
Crabgrass	<i>Digitaria spp</i>
Foxtail, Bristly	<i>Setaria verticillata</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
Wheat, Volunteer	<i>Triticum aestivum</i>

## Broadleaf Weeds

Chamomile, False	<i>Matricaria maritima</i> L.
Chickweed, Common	<i>Stellaria media</i>
Henbit	<i>Lamium amplexicaule</i>
Kochia	<i>Kochia scoparia</i>
Mustard, Birdsrape	<i>Brassica rapa</i> L.
Mustard, Black	<i>Brassica nigra</i>
Mustard, Wild	<i>Sinapsis arvensis</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Pigweed, Smooth	<i>Amaranthus hybridus</i>
Purslane, Common	<i>Portulaca oleracea</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>

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Wild Radish

*Raphanus raphanistrum*

## POSTEMERGENCE PARTIAL CONTROL ‡

### Grass Weeds

Johnsongrass, seedling	<i>Sorghum halepense</i>
Millet, wild-proso	<i>Panicum miliaceum</i>
Oat, wild	<i>Avena fatua</i>
Quackgrass†	<i>Elymus repens</i>
Stinkgrass	<i>Eragrostis ciliaris</i>
Yellow Nutsedge	<i>Cyperus esculentus</i>

### Broadleaf Weeds

Thistle, Canada†	<i>Cirsium arvense</i>
Cocklebur	<i>Xanthium spp.</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>
Nightshade, Hairy	<i>Solanum sarrachoides</i>
Nightshade*†, Black (cotyledon stage only)	<i>Solanum nigrum</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Quackgrass†	<i>Elymus repens</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Volunteer Alfalfa**	<i>Medicago sativa</i>

\* Eastern black nightshade (*Solanum ptycanthum*) is NOT controlled or suppressed.

Black nightshade partial control is only for use in Tomatoes in California.

\*\* Except in California

‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of weeds, and the environmental conditions following treatment.

† See Specific Weed Problems

## SOLIDA HERBICIDE ROTATIONAL CROP GUIDELINES – TOMATO

For crops listed below, planting prior to the interval shown may result in crop injury when using SOLIDA herbicide. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless supplemental sprinkler irrigation has been applied and totals greater than 15 inches during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (months)
Beans, Dry	10
Beans, Snap	10
Corn, Field	Anytime
Corn, Sweet	10
Cotton	10
Cucumber	10
Garlic	6
Potatoes	Anytime
Soybeans	10
Tomatoes	Anytime

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Wheat, Winter	4
Crops Not Listed	12
<b>Note:</b> Where drip-irrigated tomatoes are grown, rotate only to tomato, potato, or field corn as crop injury may result.	

Rotational crops may be planted at indicated intervals provided the fields are deep disked or plowed and thorough soil mixing is achieved prior to planting the rotational crop.

## RESTRICTIONS – TOMATO

- Do not apply **SOLIDA herbicide within 45 days of tomato harvest.**
- Do not apply SOLIDA herbicide by air on tomatoes.
- Do not apply using assisted (Airblast) field crops sprayers on tomatoes.
- Do not exceed **4.0 ounces SOLIDA herbicide per acre (broadcast basis) on tomatoes during the same growing season.**
- Do not apply to tomatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to tomatoes growing in fields.
- Do not apply through any type of irrigation system.

## CULTIVATION

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at application, or weeds that emerge after an application of SOLIDA herbicide.

- Cultivation up to 7 days before the postemergence application of SOLIDA herbicide may decrease weed control by pruning weed roots, placing the weeds under stress or covering the weeds with soil and preventing coverage by SOLIDA herbicide.
- To allow SOLIDA herbicide to fully control treated weeds, do not cultivate for 7 days after application.
- Optimizing timing for cultivation is 7 to 14 days after a postemergence application of SOLIDA herbicide.

## SPECIFIC WEED PROBLEMS

**Quackgrass:** For best results, apply SOLIDA herbicide postemergence to quackgrass that is 4 to 8 inches tall. Quackgrass not emerged at the time of application will not be controlled or suppressed and would require a second postemergence application for acceptable control.

**Black Nightshade (Tomatoes):** For best results, apply SOLIDA herbicide preemergence (prior to weed germination) at 2 to 4 oz per acre followed by a postemergence application at 1 to 2 oz per acre to small actively growing weeds.

**Canada Thistle:** For best results, apply SOLIDA herbicide postemergence to small actively growing Canada thistle. Canada thistle not emerged at the time of application will not be controlled or suppressed and would require a second postemergence application for acceptable control.

## SPRAY ADJUVANTS

Include a spray adjuvant with applications of SOLIDA herbicide when applied by itself and postemergence to the weeds. Consult your Ag dealer or applicator prior to using an adjuvant system. If another herbicide is tank mixed with SOLIDA herbicide, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40 CFR 910.40 CFR 920).

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### **Nonionic Surfactant (NIS)**

- Apply 0.125 to 0.25% v/v (1 to 2 pints/100 gal. of water). The 0.25% v/v rate is preferred under arid or drought conditions.
- Surfactant products must contain at least 80% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

### **Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)**

- Apply at 1% volume/volume (1 gal. per 100 gal. spray solution) or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high-quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- Blended products that contain both MSO and silicone are acceptable at labeled rates.

### **Ammonium Nitrogen Fertilizer**

- Use 2 quart/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 lb/acre of a spray-grade ammonium sulfate (AMS). Use 4 quart/acre UAN or 4 lb/acre AMS under arid conditions.
- Do not use liquid nitrogen fertilizer as the total carrier solution.

### **Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with SOLIDA herbicide unless instructed to do so by Cheminova representative.

### **Precautions:**

1. The use of silicone polymer-type surfactants is not suggested as reduced weed control may result.
2. Avoid using crop oil concentrate (COC) or methylated seed oil (MSO) when tomatoes are under heat stress (>85 degrees F) as multiple stresses may cause crop injury.

## **EQUIPMENT-SPRAY VOLUMES**

Agitate the spray tank continuously to keep the material in suspension.

Do not use equipment and/or spray volumes that will cause damage from spray by drift onto nontarget sites. Do not make applications when weather conditions are likely to cause spray to drift onto nontarget sites. (see the SPRAY DRIFT MANAGEMENT section of this label for additional information).

## **GROUND APPLICATION – POTATOES AND TOMATOES**

To ensure optimum spray distribution and thorough coverage, apply SOLIDA herbicide with a properly calibrated, low-pressure (20 to 40 psi) boom sprayer equipped with flat fan, "Twinjet", underleaf banding nozzles or flood jet nozzles. Nozzle screens should be no finer than 50 mesh. When using flood nozzles, the spray pattern should overlap 100% for optimum product performance. For banded applications even-flow flat fan or twin jet spray nozzles may provide a more uniform spray distribution.

For maximum preemergence activity, prior to application, the bed or soil surface should be smooth and relatively free of crop and weed trash (dead weeds, decaying leaves, clippings, etc.). Leaves and trash may be removed by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide application. Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of SOLIDA herbicide. Cutting water furrows or cultivations that mix untreated soil into the treated areas will also reduce the effectiveness of the herbicide treatment.



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For best weed management, apply SOLIDA herbicide with another suitable residual herbicide registered for that crop on all soil types, but especially on coarse-textured soils under standard sprinklers or micro-sprinklers.

More than one banded application of SOLIDA herbicide may be needed to provide extended weed control.

## PRECAUTIONS

- Potato and tomato varieties may differ in their response to various herbicides. Cheminova recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use to a small area.
- Preemergence use on soils containing more than 6% organic matter may not provide adequate soil-residual weed control and may result in reduced weed control.
- Preemergence and postemergence use on rill-irrigated potatoes and tomatoes (furrow or gravity) may not provide adequate weed control in the absence of rainfall.
- If sprinklers are used for frost protection, delay the application of SOLIDA herbicide until stress from environmental conditions has passed.
- Avoid spray drift to any adjacent crops or desirable plants as injury may occur.
- Crop injury may occur following an application of SOLIDA herbicide if there is a prolonged period of cold weather and/or cold weather in conjunction with wet soils caused by poor drainage or excessive use of sprinkler irrigation for frost protection.
- Draining or flushing equipment on or near desirable trees or other plants, or in areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots may injure these plants. Trees or other desirable plants whose roots extend into a treated crop use area may be injured.
- For best results, maintain spray tank solution at pH 5 to 7.
- Do not apply to frozen or snow-covered soil. Crop injury may occur from applications made to poorly drained soils.
- If the selected companion herbicide has a ground or surface water advisory, consider the advisory when using the companion herbicide.
- Tank mixing SOLIDA herbicide with organophosphate insecticides in tomatoes may result in crop injury.

## BLUEBERRY (HIGH AND LOW BUSH) AND CANEBERRY (RASPBERRY AND BLACKBERRY)

### BLUEBERRY (High Bush)

For broadcast applications, make a single application of SOLIDA herbicide preemergence, or early postemergence to actively growing weeds at **4 ounces per acre per year**. Use a directed spray application adjusted to provide complete coverage of the weeds while minimizing the amount of spray coming into contact with the blueberry plants. When applied as a banded treatment (50% treated band or less), SOLIDA herbicide may be applied twice per year.

Allow a minimum of 30 days between applications.

Applications made after bud break may cause temporary chlorosis and/or stunting of leaves contacted by the spray.

Use SOLIDA herbicide on high bush blueberries that have gone through at least one growing season and are in good health and vigor.

SOLIDA herbicide may be applied in tank mixture with other herbicides registered for use in high bush blueberries.

Do not apply by air.

Do not use on soils classified as sand.

Do not apply within 21 days of first harvest (**21 day PHI**)

Do not apply more than 4 ounces per acre on a broadcast application basis per year.

### **BLUEBERRY (Low Bush)**

All applications of SOLIDA herbicide are to be applied in the vegetative year growth stage of low bush blueberries. Make a single broadcast application of SOLIDA herbicide preemergence or early postemergence to actively growing weeds at **4 ounces per acre per year**. When applied as a banded treatment (50% treated band or less), SOLIDA herbicide may be applied twice per year.

Allow a minimum of 30 days between applications.

For broadcast treatments, make the application prior to bud break of the blueberries. After bud break, use a directed spray application adjusted to provide complete coverage of the weeds while minimizing spray contact with the blueberry plants.

Applications made after bud break may cause temporary chlorosis and/or stunting of leaves contacted by the spray.

Use SOLIDA herbicide on low bush blueberries that have gone through at least one growing season and are in good health and vigor.

SOLIDA herbicide may be applied in tank mixture with other herbicides registered for use in low bush blueberries.

Do not apply by air.

Do not use on soils classified as sand.

Do not apply within 21 days of first harvest (**21 day PHI**)

Do not apply more than 4 ounces per acre on a broadcast application basis per year.

### **CANEBERRY (Raspberry, Blackberry)**

For broadcast applications, make a single application of SOLIDA herbicide preemergence or early postemergence to actively growing weeds at **4 ounces per acre per year**. Use a directed spray application adjusted to provide complete coverage of the weeds while minimizing the amount of spray coming into contact with the caneberry plants. When applied as a banded treatment (50% treated band or less), SOLIDA herbicide may be applied twice per year.

Allow a minimum of 30 days between applications.

If primocanes are up at time of treatment, temporary chlorosis of foliage and/or stunting of primocane growth may occur. These symptoms are temporary and do not affect the overall health

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and vigor of primocane development.

Use SOLIDA herbicide on caneberry plants that have gone through at least one growing season and are in good health and vigor.

SOLIDA herbicide may be applied in tank mixture with other herbicides registered for use in caneberry.

Do not apply by air.

Do not use on soils classified as sand.

Do not apply within 21 days of first harvest (21 day PHI)

Do not apply more than 4 ounces per acre on a broadcast application basis per year.

## RANGELAND RESTORATION WEST OF THE MISSISSIPPI RIVER

### PRODUCT INFORMATION

A restoration management program that includes SOLIDA herbicide may be used when rangeland has become severely infested with invasive weed species such that the land has deteriorated to a point that it is no longer suitable for grazing or forage production. To reclaim these lands, the invasive weed species must first be controlled to allow native grasses to reestablish or to be replanted with desirable forage grasses. The grasses must be allowed time to reestablish before grazing or forage production is resumed. A typical restoration management program will take one to two years. SOLIDA herbicide may be used to control grass and broadleaf weeds listed in this section under Weeds Controlled. The residual activity of SOLIDA herbicide will also help prevent the reemergence of many of these weeds while desirable grasses are being reestablished.

At the maximum application rate of 4.0 ounces of SOLIDA herbicide per acre per year, desirable rangeland perennial grasses in the treated area may exhibit a temporary chlorosis (yellowing of foliage) following application. The use of an adjuvant with SOLIDA herbicide can increase desirable perennial grass injury.

Do not graze treated sites or cut for forage or hay for a minimum of 1 year after application in order to allow newly emerged grasses sufficient time to become established. Where practical, fencing or other measures are to be used to prevent early grazing of re-established sites to help promote active grass restoration.

### RESTORATION PROGRAM

An effective restoration program may include one or more of the following steps (A through F):

- A. Identify and inventory weeds and desired grass densities.
- B. Consult and plan the entire program with personnel experienced in herbicide programs and range restoration.
- C. Make applications of SOLIDA herbicide prior to soil freeze or after spring thaw. Make sure all label precautions are followed.
- D. Include a tank mix partner labeled for use on rangeland to broaden the spectrum of weeds controlled.
- E. Plant grass seed as needed to improve the site, per the Grass Replant Interval in this section of the label.
  - Plant to obtain the highest possible grass stand establishment.

- Plant a selected grass mixture to improve the desired stand.
- Use a properly fitted drill to help ensure correct seed placement and depth.
- Seed in late fall to best ensure moisture for seed germination. Seeding in the spring has the highest risk of stand failure.
- Consult with a knowledgeable grass seed supplier to select the best-suited varieties for your area.

F. Treat for second year forbs (if necessary): Treat with REPORT® Herbicide (75% chlorsulfuron) (0.25 to 1 ounce per acre) + bromoxynil (1 pint per acre) to weeds at the early growth stage.

## GRASS REPLANT INTERVAL

The replant interval is for soils with a pH of less than 7.5. Soils having a pH greater than 7.5 will require a longer interval. The replant interval is for applications made in the spring. Because SOLIDA herbicide degradation is slowed by cold, dry, or frozen soils, the replant interval for applications made in the fall should begin the spring following treatment.

Following a treatment with SOLIDA herbicide at use rates up to 4.0 ounces of product per acre, the following grasses may be replanted at least 7 months after a spring application. Rainfall or irrigation of at least 1/2 inch following treatment is necessary to replant 7 months after a SOLIDA herbicide application. If the treated site does not receive at least 1/2 inch of rainfall or irrigation within 4 weeks after SOLIDA herbicide application, then the grass replant interval is 12 months.

Crested wheatgrass	<i>Agropyron cristatum</i>
Intermediate wheatgrass	<i>Thinopyrum intermedium</i>
Blue bunch wheatgrass	<i>Pseudoroegneria spicata</i>
Squirreltail	<i>Elymus elymoides</i>
Beadless (creeping) wild rye	<i>Leymus triticoides</i>
Big bluegrass	<i>Poa ampla</i>
Idaho fescue	<i>Festuca idahoensis</i>
Smooth brome	<i>Bromus inermis</i>

Testing has indicated that there is considerable variation in response among species and types of grasses when seeded into areas treated with SOLIDA herbicide. If species other than those listed above are to be planted into areas treated with SOLIDA herbicide, a field bioassay should be performed, or previous experience may be used to determine the feasibility of replanting treated areas. To conduct a field bioassay, grow to maturity test strips of the grass species you plan to grow the following year. The test strips should cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the grass species grown in the test strips.

## APPLICATION EQUIPMENT

SOLIDA herbicide may be applied using ground or aerial spray equipment. Fixed-wing aircraft and helicopters can be used to apply SOLIDA herbicide; however, do not make applications by fixed-wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area or, when treating open tracts of land, spray drift as a result of fixed-wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a Microfoil® boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil® boom, a drift-control agent may be added at the labeled rate.

## APPLICATION RATES AND TIMING

Apply SOLIDA herbicide at 2.0 to 4.0 ounces per acre in the fall or spring, prior to moisture expectation and plant growth. Do not apply when soil is frozen. For residual activity, moisture is required to activate SOLIDA herbicide. When applied at lower rates in the spring, SOLIDA herbicide provides suppression\* of weeds listed. When applied at higher rates in the fall, weed control is afforded.

- \* Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated check. The degree of actual control that may occur will vary with the size of the weeds, the degree of weed or desirable grass competition, and environmental conditions.

## TANK MIXTURES

SOLIDA herbicide may be tank mixed with other herbicides registered for rangeland use. Refer to the label of the tank mix partner(s) for any additional use instructions or restrictions. SOLIDA herbicide may be mixed with Report Herbicide (chlorsulfuron) at 0.25 to 1 ounce per acre to broaden the spectrum of broadleaf and grass weed control. Refer to the REPORT® Herbicide label for additional information on weed species controlled, use rates, and instructions or restrictions.

## WEEDS CONTROLLED

When applied at 2.0 ounces per acre in the spring, SOLIDA herbicide suppresses the following weeds and when applied at 3.0 ounces per acre in the fall, SOLIDA herbicide controls the following weeds:

Brome, downy (cheatgrass)	<i>Bromus tectorum</i>
Brome, Japanese	<i>Bromus japonicus</i>
Cheat	<i>Bromus secalinus</i>

When applied at 4.0 ounces per acre, SOLIDA herbicide controls the following additional weeds:

Barnyardgrass	<i>Echinochloa crus-galli</i>	
Crabgrass, large	<i>Digitaria sanguinalis</i>	
Foxtail, giant	<i>Setaria faberi</i>	
Foxtail, green	<i>Setaria viridis</i>	
Foxtail, yellow	<i>Setaria pumila</i>	
Filaree redstem	<i>Erodium cicutarium</i>	))))
Fleabane, hairy	<i>Conyza bonariensis</i>	))))
Mallow, common	<i>Malva neglecta</i>	)) )
Horseweed/marestail*	<i>Conyza canadensis</i>	)) )
Medusahead	<i>Taeniatherum caput-medusae</i>	) ) ) ) )
Mustard, black	<i>Brassica nigra</i>	) ) ) ) )
Pigweed, redroot	<i>Amaranthus retroflexus</i>	) ) ) ) )
Pigweed, smooth	<i>Amaranthus hybridus</i>	) ) ) ) )
Puncturevine	<i>Tribulus terrestris</i>	) ) ) ) )
* Naturally occurring resistant biotypes of this weed are known to exist in some areas of the U.S. SOLIDA herbicide will not control these biotypes.		) ) ) ) )

## USE PRECAUTIONS AND RESTRICTIONS

Treatment of powdery, dry soil or light sandy soil when there is little likelihood of rainfall soon after treatment may result in off-target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to SOLIDA herbicide may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply SOLIDA herbicide when these conditions are identified and where powdery, dry soil or light or sandy soil is known to be prevalent in the area to be treated.

In order to reduce the potential for off-site movement of SOLIDA herbicide from wind or water-related soil erosion, do not burn, disk, or otherwise disturb treated sites between the time of application and reseeding or reestablishment of native grasses.

Preemergence use on soils containing more than 6% organic matter may result in reduced weed control.

Minimize spray drift to any adjacent crops or planned crop planting areas or desirable plants since injury may occur.

Draining or flushing equipment on or near desirable trees or other plants or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots may injure these plants.

Crops (especially crops other than pome fruit, tree nuts, stone fruit, citrus, grapes, potatoes, tomatoes, and field corn) whose roots may extend into a treated area may be injured.

Do not contaminate any body of water, including irrigation water that may be used on other crops.

Do not treat frozen soil. Do not apply in or on irrigation ditches or canals including their outer banks. Do not apply through any type of irrigation system. If restoration sites treated with SOLIDA herbicide are to be converted to an agricultural use other than rangeland, consult the SOLIDA herbicide label for all rotational crop instructions.

## SELECTIVE WEED CONTROL AND INVASIVE SPECIES MANAGEMENT IN NON-CROP SITES

SOLIDA herbicide is a water dispersible granule formulation to be mixed with water and sprayed for weed control on private, public, and military lands as follows: non-agricultural areas (such as airports, highway, railroad and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas – non-crop producing (such as farmyards, fuel storage areas, fence rows, non-irrigation ditchbanks, barrier strips, etc.); industrial sites – outdoor (such as lumberyards, pipeline and tank farms, etc.) and non-cropland wildlife habitats.

### INVASIVE SPECIES MANAGEMENT

SOLIDA herbicide may be used on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for Management of Noxious and Exotic Weeds (FICMNEW) National Early Detection and Rapid Response (EDRR) System for invasive plants.

Effective EDRR systems address invasions by eradicating the invader where possible, and

controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is recommended, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible, eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

SOLIDA herbicide is non-corrosive to spray equipment, non-flammable and non-volatile. Do not use SOLIDA herbicide in a spray solution or with spray additives that buffer the pH to below 4.0 or above 8.0 as degradation of SOLIDA herbicide may occur.

SOLIDA herbicide may be used in weed management programs on non-crop sites to provide residual preemergence and early postemergence control of the following weeds:

Barnyardgrass	<i>Echinochloa crus-galli</i>
Browme, downy	<i>Bromus tectorum</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria pumila</i>
Filaree redstem	<i>Erodium cicutarium</i>
Fleabane, hairy	<i>Conyza bonariensis</i>
Mallow, common	<i>Malva neglecta</i>
Marestail/horseweed*	<i>Conyza canadensis</i>
Medusahead	<i>Taeniatherum caput-medusae</i>
Mustard, black	<i>Brassica nigra</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Puncturevine	<i>Tribulus terrestris</i>

\* Naturally occurring resistant biotypes of this weed are known to exist in some areas of the U.S. SOLIDA herbicide will not control these biotypes.

Refer to the rest of the label for other weeds controlled.

To provide a broader spectrum of residual weed control, SOLIDA herbicide may be applied in a tank mixture with other registered preemergence herbicides. When weeds are present at application, include a labeled burndown herbicide, such as Glyfos® X-TRA.

For best results, make postemergence applications to young, actively growing weeds and include a spray adjuvant. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions. Follow the most restrictive labeling of any of the tank-mix component products.

## TANK MIXTURES

SOLIDA herbicide may be mixed with other herbicides registered for non-crop use. It may also be tank mixed with any adjuvants registered for non-crop use. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions.

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## APPLICATION INFORMATION

Apply SOLIDA herbicide at 4.0 ounces broadcast per acre. **Do not apply more than 4.0 ounces of SOLIDA herbicide per acre per year.**

For best preemergence and residual activity, SOLIDA herbicide must be activated by rainfall and applied when soil temperatures are cool. Make applications to take advantage of normal rainfall patterns (minimum of 1/2 inch) and cooler temperatures. For best results, moisture for activation should occur within 2 to 3 weeks after application.

To help ensure uniform coverage, use a minimum of 10 gallons of spray solution per acre. Nozzle selection should meet manufacturer's spray volume and pressure recommendations for preemergence or postemergence herbicide applications.

SOLIDA herbicide may be applied using ground or aerial spray equipment. Fixed wing aircraft and helicopters can be used to apply SOLIDA herbicide; however, do not make applications by fixed wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area or, when treating open tracts of land, spray drift as a result of fixed wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as helicopter equipped with a Microfoil™ boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil™ boom, a drift control agent may be added at the labeled rate.

## NON-CROPLAND RESTORATION

SOLIDA herbicide is labeled for the control of downy brome (cheatgrass), medusahead, and certain broadleaf weeds in non-cropland. In order to release desirable, perennial grass species for site restoration, SOLIDA herbicide may be applied at 3.0 to 4.0 ounces of product per acre in the fall, within 6 weeks before the expected date when the soil freezes. Use the higher rate for medusahead control.

To provide broader spectrum broadleaf weed control in non-crop land restoration, a tank mixture of SOLIDA herbicide and Report Herbicide may be used. Include Report Herbicide at the use rate of 0.5 ounce per acre.

## USE PRECAUTIONS AND RESTRICTIONS

Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off-target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to SOLIDA herbicide may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply SOLIDA herbicide when these conditions are identified and powdery, dry soil or light or sandy soil is known to be prevalent in the area to be treated.

Preemergence use on soils containing more than 6% organic matter may result in reduced weed control.

Avoid spray drift to any adjacent crops or planned crop planting areas or desirable plants since injury may occur.

Draining or flushing equipment on or near desirable trees or other plants or in areas where their



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roots may extend or in locations where the chemical may be washed or moved into contact with their roots may injure these plants.

Crops (especially crops other than pome fruit, tree nuts, stone fruit, citrus, grapes, potatoes, tomatoes, and field corn) whose roots may extend into a treated area may be injured.

Where food and/or feed crops are grown, or in areas where food and/or feed crops are planned to be grown, care should be taken to prevent any direct spray of SOLIDA herbicide onto, or drift to, these crops or planned planting areas since severe crop injury may occur.

Do not contaminate any body of water, including irrigation water that may be used on other crops. Do not apply in or on irrigation ditches or canals including their outer banks. Do not apply when the soil is frozen.

If non-crop sites treated with SOLIDA herbicide are to be converted to an agriculture use, consult the SOLIDA herbicide package label for all rotational crop instructions.

## ADDITIONAL USE INFORMATION – ALL CROPS AND USES

### MIXING INSTRUCTIONS

SOLIDA herbicide must be completely dissolved in clean water before adding to spray tanks that do not have continuous agitation during loading and mixing. (This is common for airplanes with turbine engines).

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of SOLIDA herbicide.
3. Continue agitation until the SOLIDA herbicide is fully dissolved, at least 5 minutes.
4. Once the SOLIDA herbicide is fully dissolved, maintain agitation and continue filling tank with water.
5. As the tank is filling, add tank mix partners (if desired) then add the required amount of spray adjuvant (if needed). Always add the spray adjuvant last.
6. Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly re-agitate before using.
7. Apply SOLIDA herbicide spray mixture within 24 hours of mixing to avoid product degradation.
8. If SOLIDA herbicide and a tank mix partner are to be applied in multiple loads, fully dissolve the SOLIDA herbicide in clean water prior to adding to the tank.

If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

### At the End of the Day

After each day of spraying multiple loads of SOLIDA herbicide, the interior of the tank should be rinsed with fresh water and then partially filled and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits from accumulating in the application equipment.

### After Spraying SOLIDA Herbicide and Before Spraying Other Crops

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of SOLIDA herbicide as follows:

1. Empty the tank and drain the sump completely.
2. Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush

- the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2.
  4. Remove the nozzles and screens and clean separately in a bucket containing water.

The rinsate solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum labeled use rate. If cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

**Notes:**

1. Always start with a clean spray tank.
2. Steam-cleaning aerial spray tanks should be done to facilitate the removal of any caked deposits.
3. When SOLIDA herbicide is tank mixed with other pesticides, all cleanout procedures for each product should be examined and the most rigorous procedure should be followed.
4. Follow any pre-cleanout guidelines specified on other product labels.

**SPRAY DRIFT MANAGEMENT**

The interaction of a number of equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR. Where states have more stringent regulations, they should be followed.

**IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See 'Wind, Temperature, and Humidity' and 'Temperature Inversions' sections of this label.

**CONTROLLING DROPLET SIZE - GENERAL TECHNIQUES**

- Volume – Use high flow-rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Use the lower spray pressures listed for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

**CONTROLLING DROPLET SIZE – AIRCRAFT**

- Number of Nozzles – Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type – Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length – The boom length should not exceed 3/4 of the wing or rotor length – longer

booms increase drift potential.

- Application Height – Application more than 10 feet above the canopy increases the potential for spray drift.

### **BOOM HEIGHT**

Set the boom at the lowest height that provides uniform coverage and reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Do not apply when wind speed is less than 3 mph or above 10 mph.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets or reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

### **BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS**

SOLIDA herbicide is absorbed through the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. For preemergence weed control, rainfall or sprinkler irrigation is needed to move SOLIDA herbicide into the soil. Weeds will generally not emerge from preemergence applications. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic (yellowish) three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

One to three weeks after postemergence application to weeds, leaves of susceptible plants appear chlorotic, and the growing point subsequently dies. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

SOLIDA herbicide provides the best control of weeds in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not provide satisfactory control. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

The herbicidal action of SOLIDA herbicide may be less effective on weeds stressed from adverse environmental conditions such as abnormally hot or cold temperatures, abnormal soil conditions such as extremely dry or water-saturated soil, or hail or frost damage. Incomplete control may also result on plants injured from disruptive cultural practices, herbicide carryover from a previous crop, or injury from insects, diseases, or other pests. Additionally, weeds hardened-off by drought stress are less susceptible to SOLIDA herbicide. It is best to delay applications until stress has been alleviated.

Postemergence weed control may be reduced if rainfall occurs soon after application. Several hours of dry weather are needed to allow SOLIDA herbicide to be sufficiently absorbed by weed foliage (generally SOLIDA herbicide is rainfast in 4 hours).

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in the field. Adequate control to these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide-resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank mix partners, and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide usage available in your area.

Naturally occurring weed biotypes that are resistant to Amber®, Accurate®, Report™, Report Extra™, Nuance™, and Nimble™ will also be resistant to SOLIDA herbicide.

## INTEGRATED PEST MANAGEMENT

To better control pests, Cheminova recommends the use of Integrated Pest Management (IPM). SOLIDA herbicide may be used as part of an Integrated Pest Management program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for treating specific pest/crop or site systems in your area.

## RESTRICTIONS

- Injury to or loss of desirable trees or vegetation may result from failure to observe the following:
  - Do not apply, drain, or flush equipment on or near desirable trees or other plants, or on

areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

- Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.
- Do not contaminate any body of water, including irrigation water that may be used on other crops.
- Carefully observe sprayer cleanup instructions, as spray tank residue may damage crops other than potatoes or tomatoes.
- Do not apply using Air Assisted (Air Blast) field-crop sprayers.

#### **WARRANTY DISCLAIMER**

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

#### **INHERENT RISKS OF USE**

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by Buyer.

#### **LIMITATION OF REMEDIES**

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, Cheminova shall not be liable for losses or damages resulting from handling or use of this product unless Cheminova is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, in no case shall Cheminova be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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